

**WOODWARDOSTRONGYLUS OBENDORFI NEW SPECIES (NEMATODA:
AMIDOSTOMATIDAE) FROM KANGAROOS**

by PATRICIA M. MAWSON*

Summary

MAWSON, P. M. (1976).—*Woodwardostrongylus obendorfi* new species (Nematoda: Amidostomatidae) from Kangaroos. *Trans. R. Soc. S. Aust.* **100**(3), 121-123, 31 August 1976.

Woodwardostrongylus obendorfi n.sp. is described from the oesophagus of *Macropus parryi* (type host), *M. robustus*, and *M. rufogriseus*. It is distinguished from *W. woodwardi* (Wood) chiefly in having only 6 pairs of oral denticles instead of 16. *Woodwardostrongylus* Wahid is transferred to the family Amidostomatidae, and the genus *Cristiceps* Mawson is placed as a synonym of *Woodwardostrongylus*.

Introduction

The genus *Woodwardostrongylus* was erected by Wahid (1964, p. 184) for *Pharyngostrongylus woodwardi* Wood, 1931. Mawson (1971, p. 174) not having seen Wahid's work, proposed the genus *Cristiceps* for the same species, pointing out that this genus was close to *Filarinema* in the family Amidostomatidae (sensu Inglis 1968). *Cristiceps* now falls as a synonym of *Woodwardostrongylus*, but the latter must be transferred to Amidostomatidae.

Nematodes recently taken from the oesophagus of three species of macropods have been identified as a new species of *Woodwardostrongylus*. In all three cases the worms were threaded through the oesophageal epithelium so that care was needed to collect them entire. This situation is similar, though in the oesophagus instead of the stomach, to that occupied by *W. woodwardi* in the two recorded findings (Wood 1931; Mawson 1971). It is a locale which is likely to escape all but the most careful dissections, so it is possible that species of the genus are more widely distributed than the records indicate.

I am very grateful to Dr Brian Coman and Dr Tom Kirkpatrick who shot the kangaroos and to Mr David Obendorf who first noticed the presence of the worm.

The micrographs (Figs 10, 11) were taken by E.T.E.C. Autoscan in the Central Electron Optical Laboratory of the University of Adelaide. I am indebted to Dr Karl Bartusek

of this Laboratory for help in taking the micrographs, and to P. G. Kempster for developing and printing them.

***Woodwardostrongylus obendorfi* n.sp.**

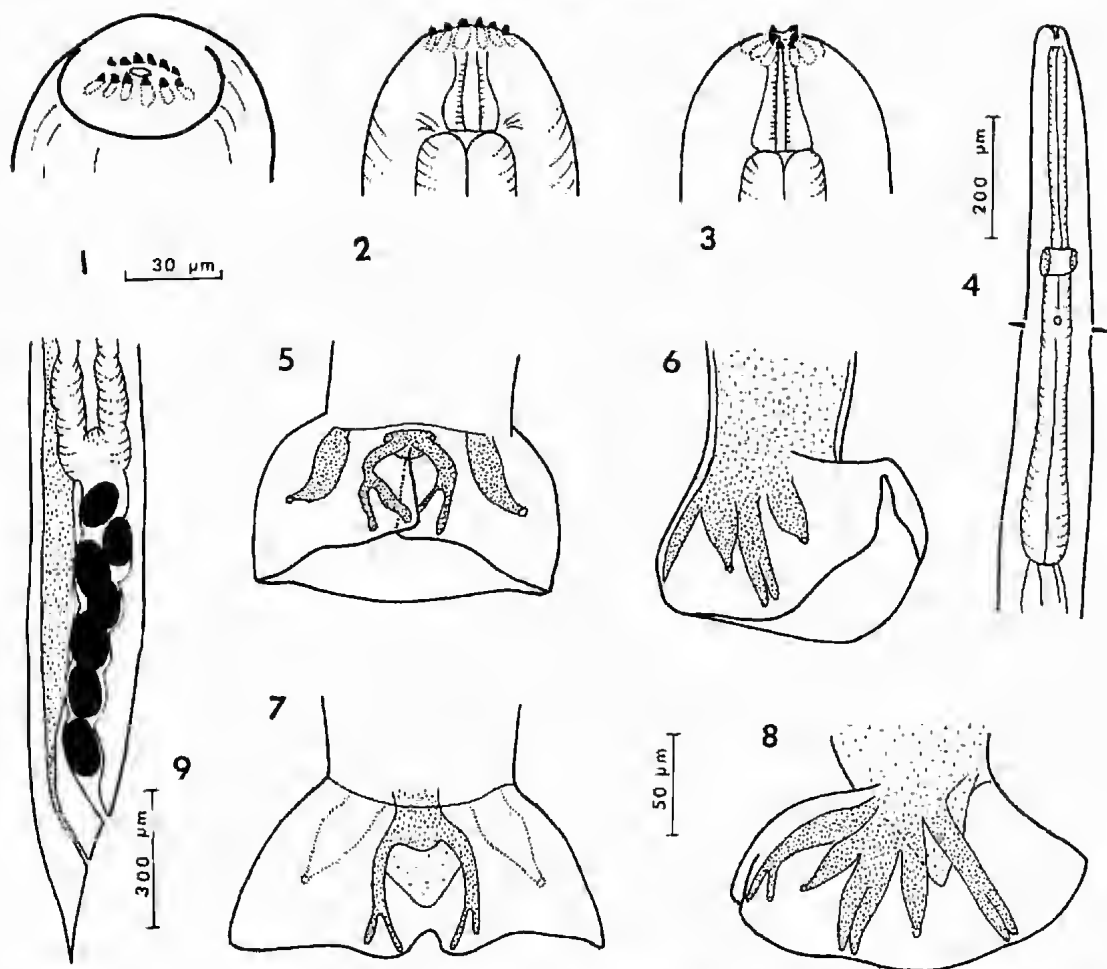
FIGS 1-11

Host and Locality: *Macropus parryi* (Bennett) (type host and *M. robustus* (Gould), from Dorriggo, N.S.W.; *M. rufogriseus* (Desmarest) from Warwick, Qld.

The worms are thin and elongate, the males 15.9-16.7 mm, the females 24-26 mm in length. The body, especially of the female, is widest in its posterior part. The rounded anterior end bears a small round mouth, on each side of which lie six prominent denticles each associated with a plate-like sclerotisation in the cuticle. The mouth leads to a thick-walled buccal capsule or vestibule. The lumen of this is narrow but wider dorsoventrally than from side to side. The walls are faintly striated transversely (more distinctly in some specimens than others), and are distinctly thicker posteriorly than anteriorly. The cephalic papillae and amphids are very small.

The oesophagus widens in its posterior half to a very slight terminal swelling. It is 800-900 μ m long in the male, 900-1050 μ m in the female. In the male the distance from the anterior end of the worm to the nerve ring is 320-400 μ m, to the cervical papillae 300-460 μ m, and to the excretory pore 440-510 μ m; in the female these distances are respec-

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Figs 1, 2 and 3—Head, in semi-cn face, lateral and ventral views respectively. Fig. 4—Oesophageal region. Figs 5, 6, 7, and 8—Views of bursa. Fig. 9—Posterior end of female. Figs 1-3 to same scale. Figs 5-8 to same scale.

tively 360–400 μm , 560–600 μm , and 500–550 μm .

The bursa is only slightly lobed, closed ventrally, and somewhat voluminous dorsally where it extends so that the dorsal ray for most of its length lies at right angles to the long axis of the body. The arrangement of the rays is shown in Figs 5–8. The genital pore is of medium size, apparently without accessory lobes. The spicules are 1700–2100 μm long, the ratio body length: spicule length being 9.9–12.8. A gubernaculum is present.

In the female the tail is 180–220 μm long, conical and pointed. The vulva is shortly in

front of the anus, 300–350 μm from the posterior end. The vagina is relatively long, up to 800 μm . Vaginal eggs measure 140–150 \times 70–80 μm .

The species is distinguished from *W. woodwardi* mainly by the presence of only six pairs of oral denticles instead of sixteen pairs, and by the presence of the associated basal plates, which are not seen in the type species. There is also a difference in the site in which the species occur in the body, *W. woodwardi* in the stomach and the new species in the oesophagus. In *M. parryi* and *M. rufogriseus* the worms were numerous, but only one was found in *M. robustus*.

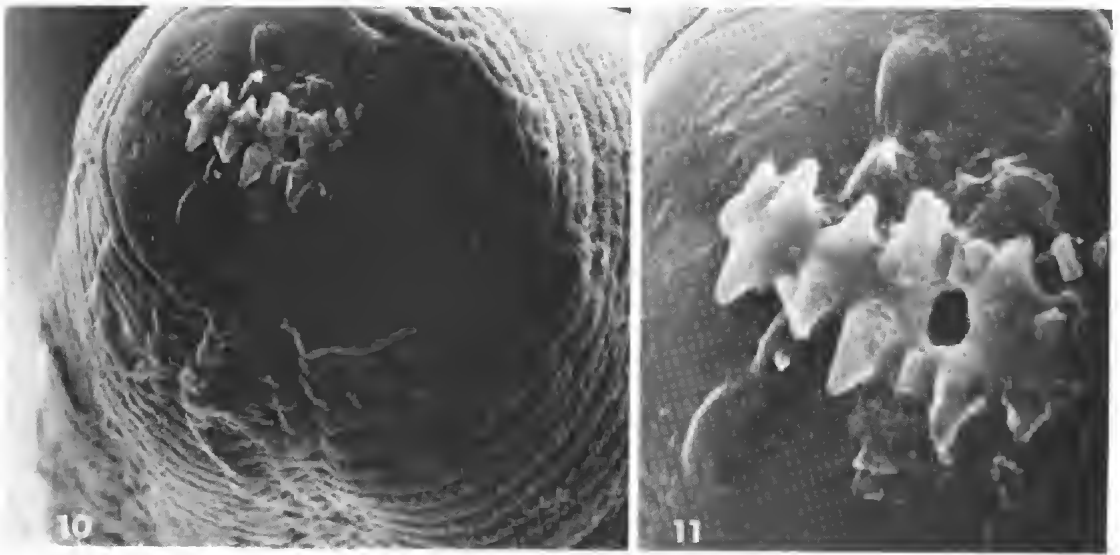


Fig. 10. S.E. Micrograph, anterior end almost en face (x 1500).

Fig. 11. S.E. Micrograph, part of region around mouth, showing two of the submedian papillae, the mouth, and some of the oral denticles (x 3 500).

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